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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,405	12/08/2003	John Iler	15818US02	2481

23446 7590 12/24/2008
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EXAMINER	
WONG, ALLEN C	

ART UNIT	PAPER NUMBER
2621	

MAIL DATE	DELIVERY MODE
12/24/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/730,405	ILER, JOHN	
	Examiner	Art Unit	
	Allen Wong	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 9-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 9-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 9/30/08 have been fully read and considered but they are not persuasive.

Regarding lines 10-12 and lines 17-18 on page 5 of applicant's remarks, applicant asserts that Yoshimura does not disclose contemporaneously processing a first subset of the encoded symbols to identify a second subset of the encoded symbols. The examiner respectfully disagrees. In Yoshimura's column 12, lines 13-25, Yoshimura's figure 3 discloses the receiving of streaming information of video data, and wherein streaming video data comprises a plurality of group of frames (GOPs) that comprises a plurality of individual frames, ie. I, P and B frames of MPEG. The I, P and B frames are encoded with subsets of encoded symbols, as shown in figures 3 and 10, the use of binary code is the common context used to process the encoded symbols for compression and transmission of video data. Thus, Yoshimura discloses contemporaneously processing a first subset of the encoded symbols to identify a second subset of the encoded symbols.

Regarding lines 24-26 on page 5 of applicant's remarks, applicant states that Yoshimura does not teach "processing" or "first subset of the encoded symbols" to "identify a second subset". The examiner respectfully disagrees. In Yoshimura's column 12, lines 13-25, Yoshimura's figure 3 discloses the receiving of streaming information of video data, and wherein streaming video data comprises a plurality of group of frames (GOPs) that comprises a plurality of

individual frames, ie. I, P and B frames of MPEG. The I, P and B frames are encoded with subsets of encoded symbols. Also, in figure 3, Yoshimura discloses the a1, b1 are the “IMPORTANT PACKET” data, and the “OTHER PACKET EXCLUDING IMPORTANT PACKET” data, and that the “IMPORTANT PACKET” data can be broadly interpreted as comprising the processing a first subset of the encoded symbols to identify a second subset of the encoded symbols wherein the encoded symbols are received on the receiver/decoder end in preparation for decoding streaming video image data, and as shown in figures 3 and 10, the use of binary code is the common context used to process the encoded symbols for compression and transmission of video data, as disclosed in column 12, lines 18-21. Thus, Yoshimura discloses contemporaneously processing a first subset of the encoded symbols to identify a second subset of the encoded symbols. Thus, claims 1 and 7 are rejected. Claims 2-6 and 9-19 are rejected for at least similar reasons.

Regarding the first paragraph on page 6 of applicant’s remarks, applicant states that the combination of Yoshimura and Hata does not disclose “wherein said encoding context indicates a probability for a plurality of possible symbols.” The examiner respectfully disagrees. As explained above, the “processing a first subset of the encoded symbols to identify a second subset of the encoded symbols, where each encoded symbol in the second subset uses a common coding context” is disclosed by Yoshimura as elaborated above and in the rejection below. Yoshimura does not specifically disclose wherein the coding context is indicates a probability of possible symbols. However, in column 14,

lines 55-62, Hata discloses the use of a symbol generation probability model for generating the probability of possible symbols for representing the elements of the coded image data. In column 15, lines 7-15, Hata discloses that the better the symbol matches the generation probability model of the symbol, less code bits are necessary to encode the symbol string. Thus, Hata teaches the coding context is indicates the probability of possible symbols. Therefore, it would have been obvious to one of ordinary skill in the art to combine Hata's teachings into Yoshimura's invention for efficiently encoding video data so as to permit efficient decoding and displaying of image data at the output, as suggested in Hata's column 15, lines 8-12.

Further, image data is always encoded first before being decoded, so Hata has the decoder to decode data, then Hata must have a corresponding encoder to permit the encoding of image data so as to permit Hata's system to decode whatever data that is encoded on the encoder terminal otherwise it would be pointless to have a decoder if there is no corresponding encoder to encode the image data so as to permit the decoding of image data.

The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Thus, the rejection is maintained.

Claim Objections

Claim 17 is objected to because of the following informalities: line 3, there is no period for claim 17, and the semicolon needs to be changed to a period. Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-7 and 9-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura (7,061,936) in view of Hata (6,404,932).

Regarding claim 1, Yoshimura discloses a method of processing a stream of data, comprising:

receiving a stream of data, the stream of data including a plurality of encoded symbols (fig.1, element 3b receives a stream of data, that is encoded, wherein the stream of data is to be viewed at element 2, see col.8, ln.49-53);

contemporaneously processing a first subset of the encoded symbols to identify a second subset of the encoded symbols, where each encoded symbol in the second subset uses a common coding context (fig.3, the data from a stream of video data is received, wherein the stream of video data comprises a plurality of group of frames (GOPs), a group of frames comprises a plurality of individual frames, ie. I, P and B frames, where the frames (I, P and B) are encoded with subsets of encoded symbols, wherein fig.3 and 10, the use of binary code is the common context used to process the encoded symbols, see col.12, ln.13-25);

evaluating at least one symbol from the second subset of encoded symbols to determine the common coding context for the second subset (fig.3, note the a1, b1 are the “IMPORTANT PACKET” data, and the “OTHER PACKET EXCLUDING IMPORTANT PACKET” data, in that fig.3 and 10, the use of binary code is the common context used to process the encoded symbols, see col.12, ln.18-21); and

using the common coding context to process the second subset of encoded symbols (fig.3 and 10, the use of binary code is the common context used to process the encoded symbols).

Yoshimura does not specifically disclose wherein the coding context is indicates a probability of possible symbols. However, Hata teaches the coding context is indicates the probability of possible symbols (col.14, ln.55-62, Hata discloses the use of a symbol generation probability model for generating the probability of possible symbols for representing the elements of the coded image data, col.15, ln.7-15, Hata discloses that the better the symbol matches the generation probability model of the symbol, less code bits are necessary to encode the symbol string). Therefore, it would have been obvious to one of ordinary skill in the art to combine Hata's teachings into Yoshimura's invention for efficiently encoding video data so as to permit efficient decoding and displaying of image data at the output (Hata's col.15, ln.8-12).

Regarding claim 2, Yoshimura discloses wherein processing the second subset of encoded symbols comprises decoding the stream of data (fig.3, note at 3b, the data is decoded).

Regarding claim 3, Yoshimura discloses the data stream includes encoded video data (fig.3, note video frames A, B and C are encoded, in that the data from a stream of video data is received, wherein the stream of video data comprises a plurality of frames, a group of frames comprises a plurality of frames, where the frames are encoded with subsets of encoded symbols).

Regarding claim 4, Yoshimura discloses the encoded symbols represent elements of the encoded video data (fig.3, note video frames A, B and C are encoded, in that the data from a stream of video data is received, wherein the stream of video data comprises a plurality of frames, a group of frames

comprises a plurality of frames, where the frames are encoded with subsets of encoded symbols).

Regarding claims 5-6, Yoshimura H.264 and MPEG-4 part 10 standard encoding scheme (col.11, ln.37, MPEG-4 is also known as H.264).

Regarding claim 7, Yoshimura discloses a method of processing a stream of data, comprising:

receiving a stream of data, the stream of data comprising a plurality of symbols to be processed (fig.1, element 3b receives a stream of data, that is encoded, wherein the stream of data is to be viewed at element 2, see col.8, ln.49-53);

contemporaneously processing a first subset of the symbols to identify a second subset of the symbols, where each symbol in the second subset uses a common coding context (fig.3, the data from a stream of video data is received, wherein the stream of video data comprises a plurality of group of frames (GOPs), a group of frames comprises a plurality of individual frames, ie. I, P and B frames, where the frames (I, P and B) are encoded with subsets of encoded symbols, wherein fig.3 and 10, the use of binary code is the common context used to process the encoded symbols, see col.12, ln.13-25);

evaluating at least one symbol from the second subset of symbols to determine the common coding context (fig.3, note the a1, b1 are the “IMPORTANT PACKET” data, and the “OTHER PACKET EXCLUDING IMPORTANT PACKET” data, in that fig.3 and 10, the use of binary code is the

common context used to process the encoded symbols, see col.12, ln.18-21); and

using the common coding context to process the second subset of symbols (fig.3 and 10, the use of binary code is the common context used to process the encoded symbols).

Yoshimura does not specifically disclose wherein the coding context is indicates a probability of possible symbols. However, Hata teaches the coding context is indicates the probability of possible symbols (col.14, ln.55-62, Hata discloses the use of a symbol generation probability model for generating the probability of possible symbols for representing the elements of the coded image data, col.15, ln.7-15, Hata discloses that the better the symbol matches the generation probability model of the symbol, less code bits are necessary to encode the symbol string). Therefore, it would have been obvious to one of ordinary skill in the art to combine Hata's teachings into Yoshimura's invention for efficiently encoding video data so as to permit efficient decoding and displaying of image data at the output (Hata's col.15, ln.8-12).

Regarding claim 9, Yoshimura discloses the data stream includes encoded video data (fig.3, note video frames A, B and C are encoded, in that the data from a stream of video data is received, wherein the stream of video data comprises a plurality of frames, a group of frames comprises a plurality of frames, where the frames are encoded with subsets of encoded symbols).

Regarding claim 10, Yoshimura discloses the encoded symbols represent elements of the encoded video data (fig.3, note video frames A, B and C are

encoded, in that the data from a stream of video data is received, wherein the stream of video data comprises a plurality of frames, a group of frames comprises a plurality of frames, where the frames are encoded with subsets of encoded symbols).

Regarding claims 11-12, Yoshimura discloses H.264 and MPEG-4 part 10 standard encoding scheme (col.11, ln.37, MPEG-4 is also known as H.264).

Regarding claim 13, Yoshimura does not specifically disclose the coding context indicates a most probable symbol. However, Hata teaches the coding context indicates a most probable symbol (figs.23-26 and col.19, ln.47 to col.20, ln.24, Hata discloses the assignment of an index value according to the state of each pixel, wherein for instance, index 0 has a 0.9 or 90% chance to be assigned under symbol 0 and 0.1 or 10% chance to be assigned under symbol 1, thus, for index 0, symbol 0 is the most probable symbol). Therefore, it would have been obvious to one of ordinary skill in the art to combine Hata's teachings into Yoshimura's invention for efficiently encoding video data so as to permit efficient decoding and displaying of image data at the output (Hata's col.15, ln.8-12).

Regarding claim 14, Yoshimura does not specifically disclose the coding context indicates a less probable symbol. However, Hata teaches the coding context indicates a less probable symbol (figs.23-26 and col.19, ln.47 to col.20, ln.24, Hata discloses the assignment of an index value according to the state of each pixel, wherein for example, index 0 has a 0.9 or 90% chance to be assigned under symbol 0 and 0.1 or 10% chance to be assigned under symbol

1, thus, for index 0, symbol 1 is the less probable symbol). Therefore, it would have been obvious to one of ordinary skill in the art to combine Hata's teachings into Yoshimura's invention for efficiently encoding video data so as to permit efficient decoding and displaying of image data at the output (Hata's col.15, ln.8-12).

Regarding claim 15, Yoshimura does not specifically disclose the coding context indicates a most probable symbol. However, Hata teaches the coding context indicates a most probable symbol (figs.23-26 and col.19, ln.47 to col.20, ln.24, Hata discloses the assignment of an index value according to the state of each pixel, wherein for instance, index 0 has a 0.9 or 90% chance to be assigned under symbol 0 and 0.1 or 10% chance to be assigned under symbol 1, thus, for index 0, symbol 0 is the most probable symbol). Therefore, it would have been obvious to one of ordinary skill in the art to combine Hata's teachings into Yoshimura's invention for efficiently encoding video data so as to permit efficient decoding and displaying of image data at the output (Hata's col.15, ln.8-12).

Regarding claim 16, Yoshimura does not specifically disclose the coding context indicates a less probable symbol. However, Hata teaches the coding context indicates a less probable symbol (figs.23-26 and col.19, ln.47 to col.20, ln.24, Hata discloses the assignment of an index value according to the state of each pixel, wherein for example, index 0 has a 0.9 or 90% chance to be assigned under symbol 0 and 0.1 or 10% chance to be assigned under symbol 1, thus, for index 0, symbol 1 is the less probable symbol). Therefore, it would

have been obvious to one of ordinary skill in the art to combine Hata's teachings into Yoshimura's invention for efficiently encoding video data so as to permit efficient decoding and displaying of image data at the output (Hata's col.15, ln.8-12).

Regarding claim 17, Yoshimura does not specifically disclose further comprising determining a probability for the most likely symbol; and determining a probability for the less likely symbol. However, Hata teaches the coding context is indicates the probability of possible symbols (col.14, ln.55-62, Hata discloses the use of a symbol generation probability model for generating the probability of possible symbols for representing the elements of the coded image data, col.15, ln.7-15, Hata discloses that the better the symbol matches the generation probability model of the symbol, less code bits are necessary to encode the symbol string), wherein possible symbols include most probable symbols and less likely symbols (figs.23-26 and col.19, ln.47 to col.20, ln.24, Hata discloses the assignment of an index value according to the state of each pixel, wherein for instance, index 0 has a 0.9 or 90% chance to be assigned under symbol 0 and 0.1 or 10% chance to be assigned under symbol 1, thus, for index 0, symbol 0 is the most probable symbol, and for index 0, symbol 1 is the less probable symbol). Therefore, it would have been obvious to one of ordinary skill in the art to combine Hata's teachings into Yoshimura's invention for efficiently encoding video data so as to permit efficient decoding and displaying of image data at the output (Hata's col.15, ln.8-12).

Regarding claim 18, Yoshimura does not specifically disclose establishing a boundary value based on the probability for the most likely symbol and the less likely symbol. However, Hata teaches establishing the boundary value based on the probability for the most likely symbol and the less likely symbol (figs.23-26 and col.19, ln.47 to col.20, ln.24, Hata discloses the assignment of an index value according to the state of each pixel, wherein for instance, index 0 has a 0.9 or 90% chance to be assigned under symbol 0 and 0.1 or 10% chance to be assigned under symbol 1, thus, for index 0, symbol 0 is the most probable symbol, and for index 0, symbol 1 is the less probable symbol, wherein the establishment of the “most likely symbol" and the “least likely symbol” are considered to be boundary values, thus, the boundary value is established). Therefore, it would have been obvious to one of ordinary skill in the art to combine Hata’s teachings into Yoshimura’s invention for efficiently encoding video data so as to permit efficient decoding and displaying of image data at the output (Hata’s col.15, ln.8-12).

Regarding claim 19, Yoshimura discloses calculating a code value from the stream of data (col.8, ln.49-53, fig.1, element 3b receives a stream of data, that is encoded, wherein the stream of data is to be viewed at element 2, thus, coded values are already calculated from the stream of data by using the use of binary code, ie. common context, for processing the encoded symbols, see col.12, ln.13-25). Yoshimura does not disclose determining whether to select the most likely symbol or the less likely symbol based on a comparison of the code value with the boundary value. However, Hata teaches determination of

selection between the most likely symbol and the less likely symbol after comparison of the code value with the boundary value (figs.23-26 and col.19, ln.47 to col.20, ln.24, Hata discloses the assignment of an index value according to the state of each pixel, wherein for instance, index 0 has a 0.9 or 90% chance to be assigned under symbol 0 and 0.1 or 10% chance to be assigned under symbol 1, thus, for index 0, symbol 0 is the most probable symbol, and for index 0, symbol 1 is the less probable symbol, thus, the most likely or least likely symbol is selected or assigned based on the comparison or evaluation of the values to the established boundary value). Therefore, it would have been obvious to one of ordinary skill in the art to combine Hata's teachings into Yoshimura's invention for efficiently encoding video data so as to permit efficient decoding and displaying of image data at the output (Hata's col.15, ln.8-12).

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will

the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Allen Wong
Primary Examiner

Art Unit 2621

/Allen Wong/
Primary Examiner, Art Unit 2621
12/25/08